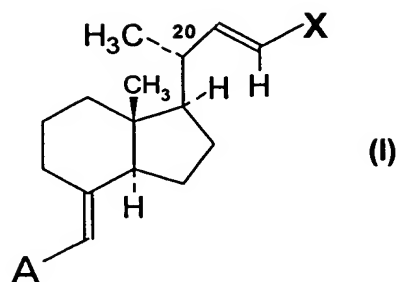


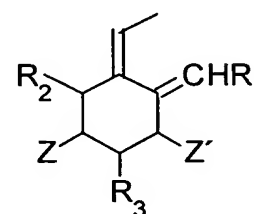
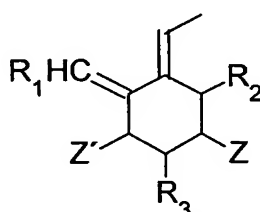
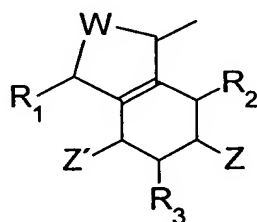
CLAIMS

1. A compound of general formula (I)



wherein:

- X represents a halogen atom selected from chlorine, bromine and iodine and
- A is selected from any of the moieties corresponding to general formulas (A1), (A2) and (A3)



in which:

- Z and Z' are independently selected from hydrogen, a hydroxyl group and an -OR protected hydroxyl group, where R is a hydroxyl protective group;
- W represents a dienophile selected from SO₂ and a diacylazo compound such as 4-phenyl-1,2,4-triazolin-3,5-dione or phthalazin-1,4-dione; and
- R₁, R₂ and R₃ are independently selected from hydrogen, halogen, a hydroxyl group, an -OR protected hydroxyl group, wherein R is a hydroxyl protective group, C₁-C₆ alkyl or C₁-C₆ alkenyl, optionally substituted with halogen, hydroxyl, cyano or amino, or a dialkyl(C₁-C₅)ether or alkyl(C₁-C₅)amino group.

2. A compound according to claim 1, wherein X is an iodine atom.

3. A compound according to any of claims 1 or 2, wherein W is the SO₂ group.

4. A compound according to any of claims 1 to 3, wherein R_1 , R_2 and R_3 are independently selected from hydrogen, halogen and hydroxyl.

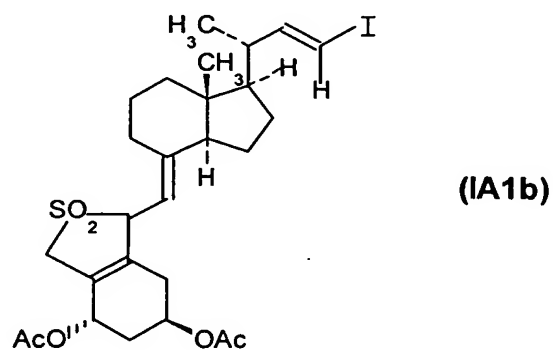
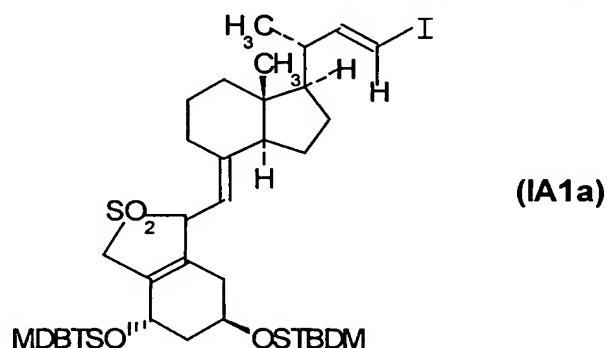
5. A compound according to claim 4, wherein R_1 , R_2 and R_3 are simultaneously hydrogen.

6. A compound according to any of claims 1 to 5, wherein Z and Z' are independently selected from a hydroxyl group and an -OR protected hydroxyl group in which the protective group is selected from a silyl ether and a carboxylic ester.

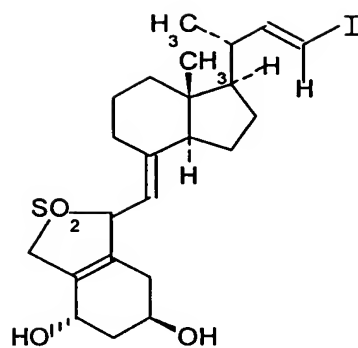
7. A compound according to any of claims 1 a 6, wherein simultaneously:

- X is an iodine atom,
- W is the SO_2 group,
- R_1 , R_2 and R_3 are hydrogen, and
- Z and Z' are independently selected from a hydroxyl group and an -OR protected hydroxyl group in which the protective group is selected from a silyl ether and a carboxylic ester group.

8. A compound according to any of claims 1 to 7, selected from the group formed by:



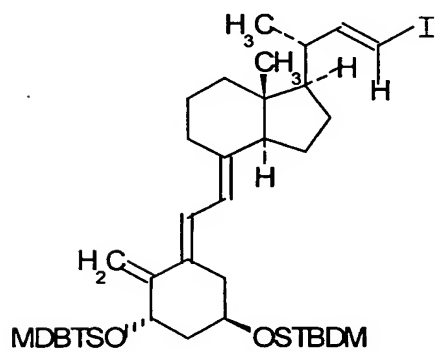
5



(IA1c)

10

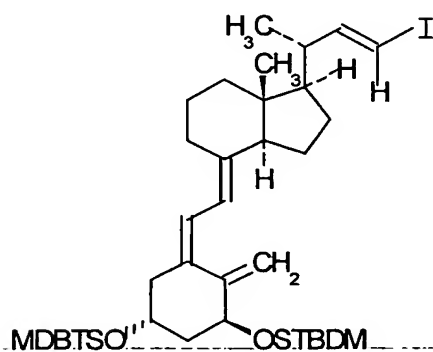
15



(IA2a)

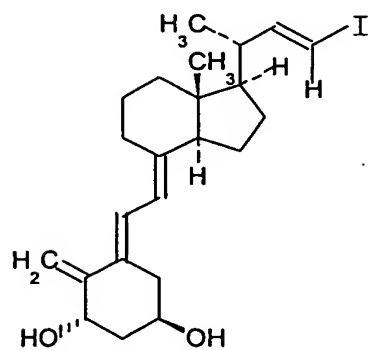
20

25



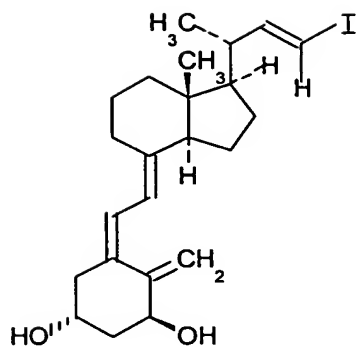
(IA3a)

30



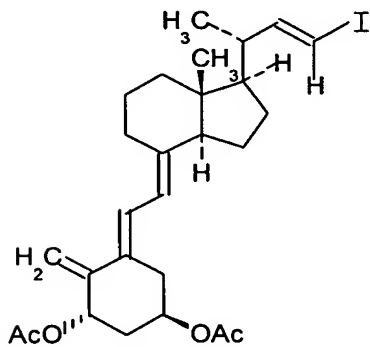
(IA2c)

5



(IA3c)

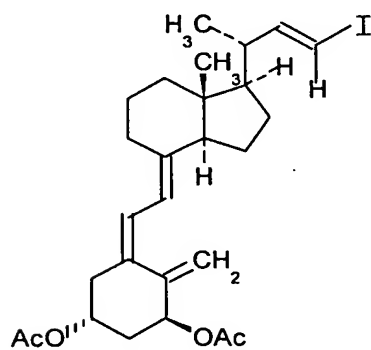
10



(IA2b)

15

20



(IA3b)

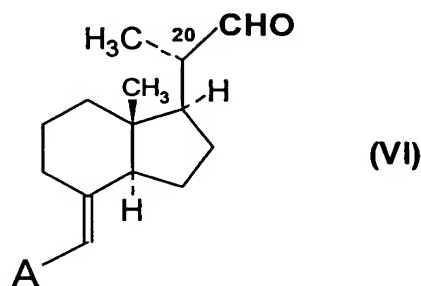
25

where

30

STBDM or MDBTS represents a t-butyldimethylsilyl group; and
OAc or AcO represent an acetoxy group.

9. A process for preparing a compound of formula (I) according to any of claims 1 to 8, comprising reacting an aldehyde of general formula (VI)



10 wherein **A** has the meaning indicated in relation to the compounds of general formula (I), with a haloform selected from chloroform, bromoform and iodoform, in the presence of a divalent chromium (Cr^{2+}) salt or complex and, if so desired, converting the compound of formula (I) into another desired compound of formula (I).

15 10. A process according to claim 9, wherein the reaction of the aldehyde with the haloform is carried out in a polar aprotic solvent.

11. A process according to claim 10, wherein said polar aprotic solvent is an ether.

20 12. A process according to claim 11, wherein said polar aprotic solvent is tetrahydrofuran (THF).

13. A process according to any of claims 9 to 12, wherein the reaction of the aldehyde with the haloform is carried out at a temperature comprised between -50°C and $+30^{\circ}\text{C}$.

25 14. A process according to any of claims 9 to 13, wherein said divalent chromium salt is Cr^{2+} chloride (Cl_2Cr).

15. A process according to any of claims 9 to 13, wherein the divalent chromium can be regenerated with manganese/trichloromethylsilane.

30 16. A process according to any of claims 9 to 13, wherein the divalent chromium is obtained *in situ* from a trivalent chromium salt by means of reaction with a metal hydride or with tetrakis(dimethylaminoethylene), or by electroreduction, or by metal manganese.

17. A process according to claim 9, comprising converting the obtained compound of formula (I) into another compound of formula (I), such that:

- 5 - when moiety **A** in the starting aldehyde (VI) corresponds to general formula (A1) and the compound of formula (I) is wished to be obtained in which **A** is the moiety of general formula (A2), the product obtained from the reaction of the aldehyde with the haloform in the presence of a Cr^{2+} complex or salt is reacted with a base,
- 10 - when moiety **A** in the starting aldehyde (VI) corresponds to general formula (A1) and the compound of formula (I) is wished to be obtained in which **A** is the moiety of general formula (A3), the product obtained from the reaction of the aldehyde with the haloform in the presence of a Cr^{2+} complex or salt is first reacted with a base and then subjected to UV or VIS light irradiation until obtaining the 5(Z) configuration, and
- 15 - when moiety **A** in the starting aldehyde (VI) corresponds to general formula (A2) and the compound of formula (I) is wished to be obtained in which **A** is the moiety of general formula (A3), the product obtained from the reaction of the aldehyde with the haloform in the presence of a Cr^{2+} complex or salt is subjected to UV or VIS light irradiation until obtaining
- 20 the 5(Z) configuration.

18. A process according to claim 17, wherein when a moiety of general formula (A1) is to be converted into a moiety of general formula (A2), the base to be used is selected from alkaline metal carbonates and bicarbonates, and the reaction is carried out in a polar protic or aprotic solvent.

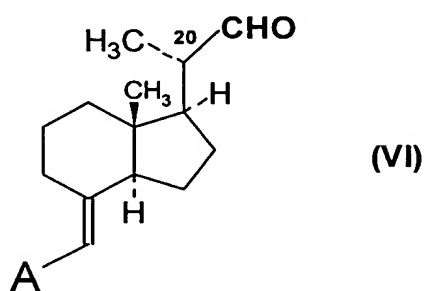
19. A process according to claim 17, wherein when a moiety of general formula (A2) is to be converted into a moiety of general formula (A3), light irradiation is carried out in the presence of iodine or diphenyl selenide and diffuse light, or else in the presence of photosensitizers derived from anthracene, acridine or phenazine and ultraviolet light.

20. A process according to claim 17, wherein the compounds of general formula (I) in which Z and/or Z' are free hydroxyl groups are obtained by means of deprotection of the corresponding

compounds in which Z and Z' are (-OR) protected hydroxyl groups.

21. A process according to claim 17, wherein the compounds of general formula (I) in which Z and/or Z' are (-OR) protected hydroxyl groups are obtained by means of the protection of the corresponding compounds in which Z and Z' are free hydroxyl groups.

22. The use of a compound of general formula (VI)



wherein **A** has the meaning indicated in claim 1, for obtaining a compound of general formula (I) defined in claims 1 to 8.